

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION OF TRANSMITTAL
OF COPIES OF TRANSLATION
OF THE INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY
(CHAPTER I OR CHAPTER II
OF THE PATENT COOPERATION TREATY)
(PCT Rules 44bis.3(c) and 72.2)

To:

NAKANO, Minoru
c/o Sumitomo Electric Industries, Ltd.
1-3, Shimaya 1-chome
Konohana-ku, Osaka-shi
Osaka 554-0024
JAPON

Date of mailing (day/month/year) 03 August 2006 (03.08.2006)	IMPORTANT NOTIFICATION
Applicant's or agent's file reference 104315-WO-00	
International application No. PCT/JP2004/017677	International filing date (day/month/year) 22 November 2004 (22.11.2004)
Applicant SUMITOMO ELECTRIC INDUSTRIES, LTD. et al	

1. Transmittal of the translation to the applicant.

The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter I).



The International Bureau transmits herewith a copy of the English translation of the international preliminary report on patentability (Chapter II).

2. Transmittal of the copy of the translation to the designated or elected Offices.

The International Bureau notifies the applicant that copies of that translation have been transmitted to the following designated or elected Offices requiring such translation:

None

The following designated or elected Offices, having waived the requirement for such a transmittal at this time, will receive copies of that translation from the International Bureau only upon their request:

AE, AG, AL, AM, AP, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EA, EC, EE, EG, EP, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OA, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

3. Reminder regarding translation into (one of) the official language(s) of the elected Office(s).

The applicant is reminded that, where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary report on patentability (Chapter II).

It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned within the applicable time limit (Rule 74.1). See Volume II of the PCT Applicant's Guide for further details.

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer Masashi Honda
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PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference 104315-WO-00	FOR FURTHER ACTION	See item 4 below
International application No. PCT/JP2004/017677	International filing date (<i>day/month/year</i>) 22 November 2004 (22.11.2004)	Priority date (<i>day/month/year</i>) 27 November 2003 (27.11.2003)
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237		
Applicant SUMITOMO ELECTRIC INDUSTRIES, LTD.		

1.	This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 <i>bis</i> .1(a).																								
2.	This REPORT consists of a total of 6 sheets, including this cover sheet. In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.																								
3.	<p>This report contains indications relating to the following items:</p> <table style="width: 100%;"> <tr> <td style="width: 10%; text-align: center;"><input checked="" type="checkbox"/></td> <td style="width: 30%;">Box No. I</td> <td style="width: 80%;">Basis of the report</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table>	<input checked="" type="checkbox"/>	Box No. I	Basis of the report	<input type="checkbox"/>	Box No. II	Priority	<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	<input type="checkbox"/>	Box No. IV	Lack of unity of invention	<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	<input type="checkbox"/>	Box No. VI	Certain documents cited	<input type="checkbox"/>	Box No. VII	Certain defects in the international application	<input type="checkbox"/>	Box No. VIII	Certain observations on the international application
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4.	The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).																								

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. +41 22 338 82 70	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 5px;">Date of issuance of this report 24 July 2006 (24.07.2006)</td> </tr> <tr> <td style="padding: 5px;">Authorized officer <div style="text-align: right; font-weight: bold;">Masashi Honda</div></td> </tr> <tr> <td style="padding: 5px;">e-mail: pt08@wipo.int</td> </tr> </table>	Date of issuance of this report 24 July 2006 (24.07.2006)	Authorized officer <div style="text-align: right; font-weight: bold;">Masashi Honda</div>	e-mail: pt08@wipo.int
Date of issuance of this report 24 July 2006 (24.07.2006)				
Authorized officer <div style="text-align: right; font-weight: bold;">Masashi Honda</div>				
e-mail: pt08@wipo.int				

PATENT COOPERATION TREATY

TRANSLATION

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing
(day/month/year)

Applicant's or agent's file reference

104315-WO-00

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/JP2004/017677

International filing date (day/month/year)

22.11.2004

Priority date (day/month/year)

27.11.2003

International Patent Classification (IPC) or both national classification and IPC

Applicant

SUMITOMO ELECTRIC INDUSTRIES, LTD.

1. This opinion contains indications relating to the following items:

- | | | |
|-------------------------------------|--------------|--|
| <input checked="" type="checkbox"/> | Box No. I | Basis of the opinion |
| <input type="checkbox"/> | Box No. II | Priority |
| <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| <input type="checkbox"/> | Box No. IV | Lack of unity of invention |
| <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> | Box No. VI | Certain documents cited |
| <input type="checkbox"/> | Box No. VII | Certain defects in the international application |
| <input type="checkbox"/> | Box No. VIII | Certain observations on the international application |

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/JP

Authorized officer

Facsimile No.

Telephone No.

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2004/017677

Box No. I

Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/JP2004/017677

Box No. V	Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1. Statement			
Novelty (N)	Claims	1 - 14	YES
	Claims		NO
Inventive step (IS)	Claims		YES
	Claims	1 - 14	NO
Industrial applicability (IA)	Claims	1 - 14	YES
	Claims		NO
2. Citations and explanations:			
<p>Document 1: JP, 7-235376, A (Yazaki Corp.), 5 September, 1995 (05.09.95), [0017]-[0021], Fig. 1</p> <p>Document 2: US, 5670839, A (Sharp Corp.), 23 September, 1997 (23.09.97), column 1, lines 8-12, column 3, line 41 to column 4, line 56, Fig. 1, column 5, lines 59-63, Fig. 5, & JP, 7-335382, A, 22 December, 1995 (22.12.95), [0001], [0015]-[0019], Fig. 1, [0027], Fig. 5</p> <p>Document 3: JP, 10-262789, A (Toto Ltd.), 6 October, 1998 (06.10.98), [0009], Fig. 1, [0027], [0028], Fig. 9, Fig. 12</p> <p>Document 4: JP, 2001-259434, A (Konica Corp.), 25 September, 2001 (25.09.01), [Claims]</p> <p>Document 5: JP, 2002-85533, A (Mitsubishi Paper Mills Ltd.), 26 March, 2002 (26.03.02), [0018]-[0020], [0024]</p> <p>Document 6: US, 2002/0006865, A1 (Toyota Central Research and Development Laboratories, Inc.), 17 January, 2002 (17.01.02), [0023]-[0026], & JP, 2002-95976, A, 2 April, 2002 (02.04.02), [0015]-[0018]</p> <p>Document 7: JP, 2002-265937, A (Osram Sylvania Inc.), 18 September, 2002 (18.09.02), [0003], & US, 2003/0057399, A1, 27 May, 2003 (27.05.03), [0004]</p> <p>Document 8: JP, 2002-231151, A (Hitachi, Ltd.), 16 August, 2002 (16.08.02), [0028], [0054], [0061], & US, 2003/0164670, A1, 4 September, 2003 (04.09.03), [0044], [0079], [0096]</p> <p>Document 9: JP, 2002-542373, A (Honeywell Specialty Chemicals Seelze GmbH), 10 December, 2002 (10.12.02), [0012], [0043], & WO, 00-63317, A2</p> <p>Document 10: JP, 2003-249373, A (Fuji Photo Film Co., Ltd.), 5 September, 2003 (05.09.03), [Claims], [0013], [0015]-[0017]</p> <p>Document 11: JP, 10-141044, A (Hoya Corp.), 26 May, 1998 (26.05.98), [0042]-[0049], [0088], Figs. 1-8, & US, 6468428, B1, 22 October, 2002 (22.10.02)</p> <p>Claims 1-14</p> <p>Document 1 describes (1) a constitution in which (a) an inner electrode in which an EL fiber with a function to emit visible light is positioned at the center in the radial direction is provided and (b) an inner insulation layer, a light emitting layer, an outer electrode and a protective layer formed</p>			

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2004/017677

Box No. V

Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

as the outermost surface are formed around the inner electrode, (2) a constitution in which an AC electric field is applied across the electrodes, for emitting light, (3) a constitution in which an outer insulation layer is formed between the light emitting layer and the outer electrode, and (4) a constitution in which the light emitting layer has the particles of a fluorescent substance dispersed in a dielectric resin. (See [0017]-[0021] and Fig. 1.)

Document 2 describes (1) a constitution in which an EL light emitting layer capable of emitting ultraviolet light of 400 nm or less when an AC electric field is applied is provided and (2) a constitution in which the said EL light emitting layer has a mixture consisting of ZnS and MgS as a base material. (See column 1, lines 8-12, column 3, line 41 to column 4, line 56, Fig. 1, column 5, lines 59-63, and Fig. 5.)

Document 3 discloses a constitution in which EL and a photocatalyst are incorporated in one film panel for integration. The photocatalyst film described in Figs. 9 and 12 of document 3 corresponds to "a particle layer or thin film of a material with a photocatalyst function, formed as the outermost surface" of claim 3 and "a protective layer per se being a material with a photocatalyst function" described in claim 5. (See [0009], Fig. 1, [0027], [0028], Fig. 9 and Fig. 12.)

Document 4 describes a device for deodorization, antimicrobial treatment and anti-mildew treatment of an inorganic semiconductor having an organic EL element or LED together. (See "Claims".)

Document 5 describes a photocatalyst having TiO₂ doped with any one of Cu, Fe and Zn. (See [0018]-[0020] and [0024].)

Document 6 describes a photocatalyst having TiO₂ doped with either element of N and S and further doped with any one element of Mn, Fe, Co, Cu and Zn as a co-catalyst. (See [0023]-[0026].)

Document 7 describes a constitution in which an EL light emitting layer has phosphor dispersed in a ceramic dielectric. (See [0003].)

Document 8 describes (1) a constitution in which the fluorescent substance used to form a light emitting layer has ZnS and MgS as base materials, Ag as a first added element and Al as a second added element, and (2) a constitution in which the said fluorescent substance has ZnS and MgS as base materials, Cu as a first added element and Al as a second added element. (See [0028], [0054] and [0061].)

Document 9 describes a constitution in which the fluorescent substance used to form a light emitting layer has ZnS as a base material, Ag as a first added element and Cl as a second added element. (See [0012] and [0043].)

Document 10 describes a constitution in which fine semiconductor particles used to form a light emitting layer are fine particles of 10 nm or less. (See [Claims], [0013] and [0015]-[0017].)

Document 11 describes (1) a photocatalyst reaction vessel comprising photocatalyst fibers, each of which is formed by covering a light guide cylinder with a photocatalyst and (2) a photocatalyst reaction vessel having a structure in which photocatalyst sheets and light guide sheets are provided as a combination of alternate layers. (See [0042]-[0049], [0088], and Figs. 1-8.)

Therefore, the subject matters of claims 1-14 are juxtaposition of the well-known techniques described in documents 1-11 and could have been easily conceived of by a person skilled in the art.

So, the subject matters of claims 1-14 do not appear to involve an inventive step in view of

WRITTEN OPINION OF THE
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Box No. V

Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

documents 1-11 cited in the ISR.